Flying on My Wave Day

By Lt. Michael Bissell

We were two weeks into our spring at-sea period. I had soaked up a good-deal FCF on my LSO wave day. With a smirk on my face, I apologized to CAG paddles about missing a few recoveries, then made for ready four. By the way, I learned from my LSO buddies that my recovery would be MOVLAS (manually operated visual landing-aid system)—things couldn't be sweeter.

My hinge COTAC and I had flown many times before, so the brief and walk to the jet were routine. We went through start-up and final checks and taxied to the cat. I saluted, watched the shooter touch the deck, and saw the green shirt hit the button. I felt what seemed like a good shot and simultaneously noticed my AHRS had failed. Yes, we still are flying some old school non-CAINS II jets out here in Japan.

"No big deal" I thought. I'd seen this sort of thing before. I had lost a generator on the stroke and knew the other one should pick up the load in a few seconds. I focused on the airspeed indicator, then shifted my eyes to the horizon, since my attitude indicator wasn't doing me any good.

I yelled to my COTAC, "I've got it, and fire off the APU," as I climbed away from the water. By the time we got to pattern altitude, I had shifted my scan inside and had learned we lost both generators. I thought, "Why hasn't that APU started by now?"

My COTAC pointed to the only electrical indication in the jet, the APU RUN light. I double checked the APU-generator switch was on, and realized we couldn't get power to anything: no AHRS or INS, no engine instruments, no AOA, and no trim. I had nothing but

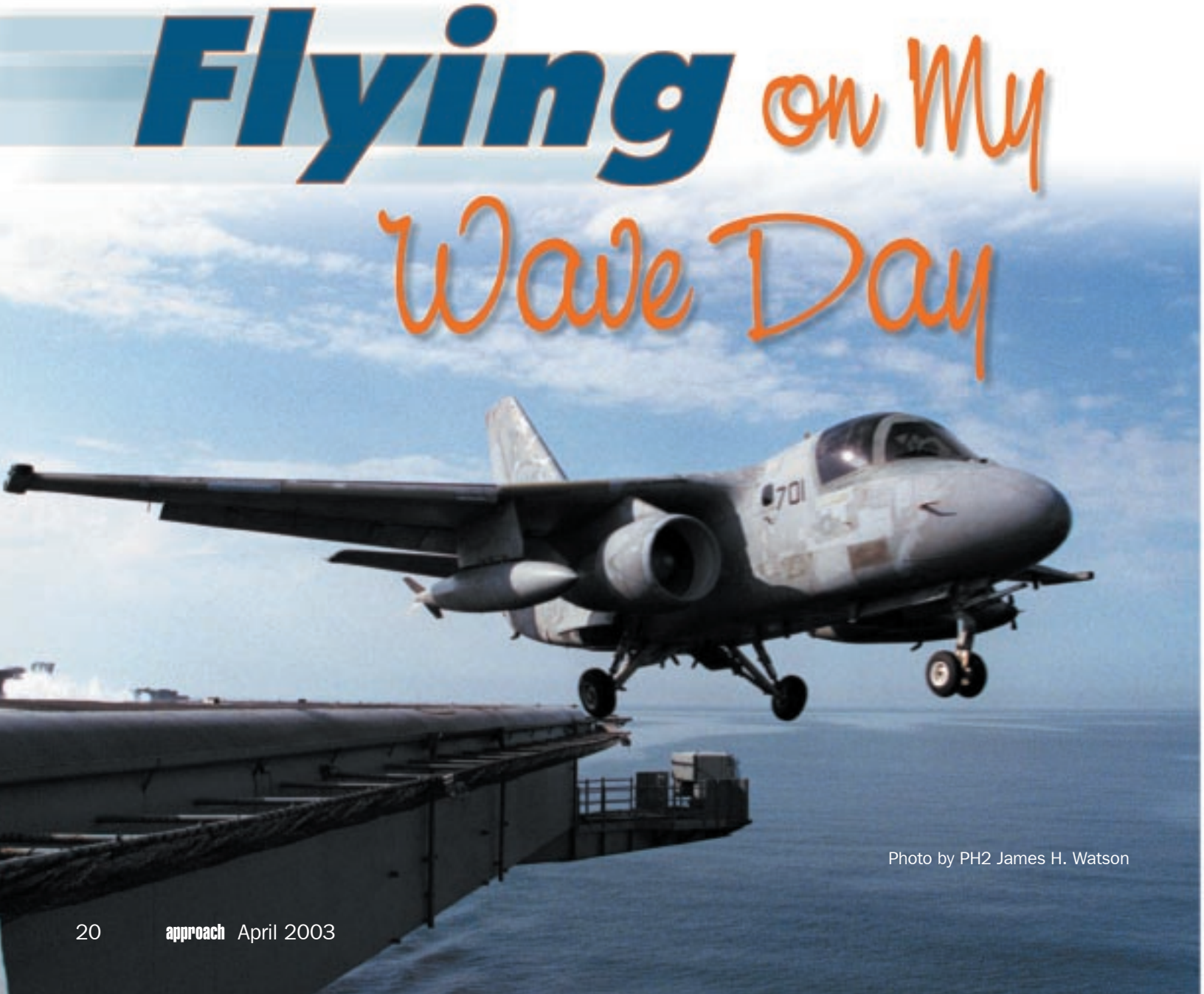

Photo by PH2 James H. Watson

pitot-static instruments and the good old peanut gyro, which already was starting to precess.

Before I go on, I need to mention it was our first day of blue-water ops, and the nearest divert was 400 miles away.

On the flip side of the problems, the weather was awesome. Who needs an AHRS when you've got the biggest attitude source in the world working for you?

I was a short cycle FCF and didn't have any gas in my drops. The bleeds fail closed with a complete electrical failure (yes, the air conditioner had cut out and it was getting hot), so even if I needed to, I couldn't get gas out of my drop tank or buddy store. I know NATOPS allows taking an arrested landing with any amount of fuel in the externals during an emergency, but, to the best of my knowledge, it had never been done before. Fortunately, I wasn't going to be the first guy to try.

I had given a CV NATOPS brief a month earlier on NORDO procedures around the boat. "OK, guys, not that you'll ever have to do anything as antiquated as this, but these are the procedures for communicating with the boat if you're NORDO," was how I had started my brief. Well, they didn't have to—I did.

I remained dirty—not that I had much choice—and flew close aboard the port side of the boat with my hook extended. My tower rep later told me the boss's first reaction was to ask why the idiot in the Hoov was making a dirty flyby. About the time I started rocking my wings overhead, the light came on, and the boat started to make a ready deck. My COTAC, bless him, had pulled out his PRC-90 and had tried to talk on guard frequency. It didn't work, but I give him points for resourcefulness.

Once the LA cleared, and I noticed the other jets in the pattern turn on their dumps, I decided to set up for my straight-in. Believe me, I was ready to come aboard. The heat in the plane brought out the Hoov's distinct aroma, and the lack of pitch trim started to wear out my arms.

I had to get rid of 2,500 pounds of gas for max trap, so I had my COTAC pull the dump handle and start his clock. Without power to the fuel indicator, we didn't have a way to monitor how much fuel we were dumping. The Viking dumps about 1,400 pounds of gas per minute. At that rate, we would be below max trap in two and a half minutes and still would have plenty of gas for a dirty bingo. I hadn't touched the gear handle or flaps after the shot, and, therefore, reasoned the gear and flaps still were down. If not, we were betting paddles would wave us off.

I selected emergency brakes and set myself up for an extended turn off the abeam. It was going to be a no-AOA approach. After consulting the charts and estimating our fuel weight, we came up with an airspeed equivalent and started down. My COTAC gave me airspeed calls, and I picked up the ball at a mile and a half. I guessed at the distance since we didn't have DME. We got "cut lights" and came in for an uneventful trap.

Round two of the goat rope started once we got on deck. Up to this point, the deck wasn't sure what kind of problem we had. They reasoned we were NORDO, but, beyond that, and for good reason, they didn't have a clue. I got the standard "hook up" and "fold your wings" signal from the yellowshirts. It wasn't until my rightseater held up a "no electrical power" sign that the tractor came over and towed us out of the LA. I kept glancing at the brake accumulator to make sure it was charged fully, but it worked as advertised, and we were chained down.

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The maintainers concluded the loss of all electrical power was a single-point failure in the system where the cannon plug connects with the back of the electrical-control panel.

Looking back, I realize a couple of things. Good CRM procedures are essential. Off the cat shot, I kept the jet flying away from the water and conveyed this to my NFO, and, although we had to yell at each other, we communicated what the other was doing. Also, his backup made a no-AOA, no-trim, no-yaw, or no DLC approach a lot easier.

Finally, I know it's been said before, but a firm grasp of CV NATOPS saved the day. Once we assessed the severity of the problem, we fell back on these procedures and didn't have to come up with some "out of left field" idea to get the plane back on deck. Some of these procedures might seem a little old, especially for aircraft with lots of generators and radios, but they're simple and have worked since my skipper was an ensign and had all his hair (we're talking eons ago).

Lt. Bissell flies with VS-21.